

CLAIMS

1. Eddy current electromagnetic retarder (1) intended to slow the  
5 rotation of an engine shaft driven about its axis (X), particularly the  
crankshaft of a vehicle engine (M), this engine having a casing (3) which  
itself comprises a frontal wall (3a) stretching substantially in a plane  
perpendicular to the axis (X) of the engine shaft, which engine shaft has  
10 one end which is directed toward the frontal wall (3a) of the casing (3) of  
the engine (M) and in the region of which the retarder (1) is mounted  
overhangingly on the frontal wall (3a) of the casing (3) of the engine (M)  
via connecting means (19), the retarder comprising a rotor part (2) which  
rotates as one coaxially with the engine shaft, a stator part (4; 4') coaxial  
15 with the engine shaft and secured to the frontal wall (3a) of the casing (3)  
of the engine (M), an armature belonging to the rotor part (2) and an  
inductor belonging to the stator part (4; 4'), the inductor being arranged on  
a stationary annular component (14, 15; 4'a, 14', 15') of the stator part (4;  
4'), facing the armature, characterized in that the rotor part (2) has  
20 symmetry of revolution about the axis of the engine shaft so that it has a  
peripheral face facing a peripheral face of the stator part (4; 4'), the  
inductor of the retarder having at least one electromagnetic winding (5; 5').
2. The retarder as claimed in claim 1, characterized in that the rotor  
part (2) has an external component of substantially cylindrical shape which  
surrounds the stator part (4) and which constitutes the armature of the  
25 retarder (1), said external component having a radial flange (11) secured  
to the engine shaft, said flange being pierced with a number of holes (13).
3. The retarder as claimed in either of claims 1 and 2, characterized in  
that the inductor of the retarder is an inductor with poles (16) each  
surrounded by an induction winding (5) and projecting radially outward on  
30 the external face of said annular component (14, 15) of the stator part (4).
4. The retarder as claimed in claim 3, characterized in that the poles  
(16) are secured to a first annulus (14), while the collection of induction  
windings constitutes a second annulus (15) of larger diameter than that of  
the first annulus (14), said second annulus (15) being assembled coaxially  
35 with said first annulus (14) by fitting each pole (16) into a respective  
induction winding (5).
5. The retarder as claimed in either of claims 1 and 2, characterized in  
that the inductor of the retarder (1) is an inductor with claws (14'b, 15'b)  
and with one single induction winding (5').

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9. The retarder as claimed in claim 8 as associated with claim 2, characterized in that the flange (11) of said external component (2) incorporates the pulley (6).

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